INTERNATIONALSEARCHREPORT

International application No. PCT/JP2005/008461

CLASSIFICATION OF SUBJECT MATTER

Int.Cl.7 H01L33/00, 21/205

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.7 H01L33/00, 21/205

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Published examined utility model applications of Japan 1922-1996
Published unexamined utility model applications of Japan 1971-2005
Registered utility model specifications of Japan 1956-2005
Published registered utility model applications of Japan 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X JP 11-330554 A (NICHIA CHEMICAL INDUSTRIES, LTD.) 1-10, 12-18, 1999.11.30 paragraphs 0013, 0026, 0038 36 11,19-35 X EP 1063711 A1 & WO 99/46822 A1 11,19-35 X AU 2746899 A & CN 1292934 A & TW 437103 B & CA 2322490 A X JP 11-191639 A (NICHIA CHEMICAL INDUSTRIES, LTD.) 1-19,36 Y Purpose of the continuation of Box C Septimal Considered to Province of the Considered to be of particular relevance active application or patent but published on or after the international filling date. The considered to be of particular relevance active application or patent but published on or after the international filling date. The considered to be of particular relevance the claimed invention cannot be considered to the special reason (as specified) Y Further documents are listed in the continuation of Box C. Special categories of cited documents of document defining the general state of the art which is not considered to be of particular relevance the claimed invention cannot be special reason (as specified) Y Further documents are listed in the continuation of Box C. Special categories of cited documents of particular relevance the claimed invention cannot be special reason (as specified) Y Further documents are listed in the continuation of Box C. Special categories of cited documents of particular relevance the claimed invention cannot be considered to the observable the published of the published of the particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is taken alone of particular relevance; the claimed invention combination being obvious to a person skilled in the art which is not combinate of the particular relevance; the claimed invention combined with one or more other such documents is taken alone combined with one or more other such document is taken alone of the particular relevance; the claimed invention combined with one or more ot				
JP 11-330554 A (NICHIA CHEMICAL INDUSTRIES, LTD.) 1999.11.30 paragraphs 0013, 0026, 0038 & EP 1063711 A1 & WO 99/46822 A1 & AU 2746899 A & CN 1292934 A & TW 437103 B & CA 2322490 A JP 11-191639 A (NICHIA CHEMICAL INDUSTRIES, LTD.) 1999.07.13 paragraphs 0012-0019, 0025-0026 A JP 2000-68594 A & US 2003/10993 A1 & EP 1014455 A1 & WO 99/5728 A1 & AU 8358498 A & CN 1265228 A & AU 747260 B & CA 2298491 A The Third documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further documents are listed in the continuation of Box C. Further document is taken alone of the surface and the publication of patent by claim (b) or which considered to involve an inventive step when the document is taken alone of the surface such documents, such combination being obvious to a person skilled in the art document in the priority date claimed Date of the actual completion of the international filing date but later than the priority date claimed Date of the actual completion of the international search than the priority date claimed Date of mailing of the international search report 30.8.2005	C. DOCUMENTS CONSIDERED TO BE RELEVANT			
1999.11.30 paragraphs 0013, 0026, 0038 & EP 1063711 A1 & WO 99/46822 A1 & AU 2746899 A & CN 1292934 A & TW 437103 B & CA 2322490 A X JP 11-191639 A (NICHIA CHEMICAL INDUSTRIES, LTD.) 1999.07.13 paragraphs 0012-0019, 0025-0026 & JP 2000-68594 A & US 2003/10993 A1 & AU 8358498 A & CN 1265228 A & AU 747260 B & CA 2298491 A & TW 400658 B V Further documents are listed in the continuation of Box C. Special categories of cited documents "A document defining the general state of the art which is not considered to be of particular relevance "E" cardier application or partent but published on or after the international filing date or cardier application of particular relevance; the claimed invention cannot be considered to be of particular relevance; the claimed invention cannot be considered to be of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is some pattern and the observation of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is some pattern family Ocument published after the international filing date or the cardier application or or the considered to involve an inventive step when the document is some pattern family Accounted the priority date claimed """ Accounted the priority date claimed invention cannot be considered to involve an inventive step when the document is combined with one or more of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more of particular step value and not in conflict with the application of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
A TW 437103 B & CA 2322490 A X JP 11-191639 A (NICHIA CHEMICAL INDUSTRIES, LTD.) 1999.07.13 paragraphs 0012-0019, 0025-0026 A JP 2000-68594 A & US 2003/10993 A1 EP 1014455 A1 & WO 99/5728 A1 EAU 8358498 A & CN 1265228 A EAU 747260 B & CA 2298491 A E TW 400658 B V Further documents are listed in the continuation of Box C. Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance; and considered to be of particular relevance; the claimed invention cannot be considered to the object of movel or cannot be considered to involve an inventive step when the document is stead of counter three international filing date but later and counter the priority date particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is taken alone and occument in the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document published prior to the international filing date but later than the priority date claimed O' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is accordance to involve an inventive step when the document is accordance to involve an inventive step when the document is accordance to involve an inventive step when the d	X	•	1	
1999.07.13 paragraphs 0012-0019, 0025-0026 & JP 2000-68594 A & US 2003/10993 A1 & EP 1014455 A1 & WO 99/5728 A1 & AU 8358498 A & CN 1265228 A & AU 747260 B & CA 2298491 A & TW 400658 B Further documents are listed in the continuation of Box C. Special categories of cited documents: A" document defining the general state of the art which is not considered to be of particular relevance E" cartier application or patient but published on or after the international filing date or considered to be of particular relevance to document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O" document referring to an oral disclosure, use, exhibition or other means P" document published prior to the international filing date but later than the priority date claimed Oacument published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 11.08.2005 Name and mailing address of the ISA/JP Japan Patent Office Japan Patent Office Japan Patent Office	Y	& AU 2746899 A & CN 1292934 A	11,19-35	
Special categories of cited documents: A" document defining the general state of the art which is not considered to be of particular relevance earlier application or patent but published on or after the international filing date or earlier application or patent but published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O" document referring to an oral disclosure, use, exhibition or other means P" document published prior to the international filing date but later than the priority date claimed Oate of the actual completion of the international search 11.08.2005 Name and mailing address of the ISA/JP Japan Patent Office "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered novel or cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 11.08.2005 Authorized officer Yukihiro KONDO	X Y	1999.07.13 paragraphs 0012-0019, 0025-0026 & JP 2000-68594 A & US 2003/10993 A1 & EP 1014455 A1 & WO 99/5728 A1 & AU 8358498 A & CN 1265228 A & AU 747260 B & CA 2298491 A		
Japan Patent Office Yukihiro KONDO	** Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" application or patent but published on or after the international filing date or understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "A" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered novel or cannot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 11.08.2005			
• I '	12K1842			

INTERNATIONALSEARCHREPORT

International application No. PCT/JP2005/008461

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
x	JP 2000-232237 A(NICHIA CHEMICAL INDUSTRIES, LTD.) 2000.08.22 paragraphs 0019-0028	1-18, 36	
Y	& EP 1063711 A1 & WO 99/46822 A1	18-35	
	& AU 2746899 A & CN 1292934 A		
٠.	& TW 437103 B & CA 2322490 A		
X	JP 2000-286451 A(NICHIA CHEMICAL INDUSTRIES, LTD.) 2000.10.13 paragraphs 0009-0037	1-18, 36	
Y 🚧 🔠	& EP 1063711 A1 & WO 99/46822 A1	19-35	
	[& AU 2746899 A & CN 1292934 A		
, M	∑ TW 437103 B & CA 2322490 A		
a* = 3a			
Y	JP 2000-82676 A(Sharp Kabushiki Kaisha)	21-36	
	2000.03.21 whole document		
1	& US 2001/22946 A1 & US 6252255 B1		
	& TW 418549 B	·	
· .			
Y	JP 2000-156348 A(NICHIA CHEMICAL INDUSTRIES,	21-36	
	LTD.) 2000.06.06 whole document		
	(NO FAMILY)		
•		. •	
Υ .	JP 2003-17420 A(NICHIA CHEMICAL INDUSTRIES,	25-35	
	LTD.) 2003.01.17 whole document		
	(NO FAMILY)		
Y ·	JP 2003-12398 A (SAMSUNG ELECTRO-MECHANICS CO.,	28-35	
*	LTD.) 2003.01.15		
	(NO FAMILY)		
	,		
	·		